

WHAT IS CLAIMED IS:

1. An adjustable oscillator circuit, comprising:  
a timing capacitor capable of being charged or discharged at an adjustable rate;  
an adjustable current source coupled to the capacitor for charging or  
5 discharging the capacitor at the adjustable rate;  
a threshold circuit for changing a charging or discharging state of the capacitor based on a charge value of the capacitor; and  
a threshold value in the threshold circuit for comparison with the charge value of the capacitor to determine the change of charging or discharging state.
2. The oscillator circuit according to claim 1, further comprising a switch in the adjustable current source operable to vary the current supplied to the capacitor.
3. The oscillator circuit according to claim 2, further comprising a digital to analog converter coupled to the switch to contribute to varying the current supplied to the capacitor.
4. The oscillator circuit according to claim 2, further comprising a passive component coupled to the switch for setting a minimum amount of current supplied from the current source.
5. The oscillator circuit according to claim 1, further comprising a comparator in the threshold circuit for comparing the threshold value to the capacitor charge value.

6. The oscillator circuit according to claim 5, further comprising a threshold switch having an output coupled to the comparator and an input coupled to the threshold value to permit the threshold value to be selectively applied to the comparator.

7. The oscillator circuit according to claim 1, wherein the threshold value comprises a first and second threshold value, the first threshold value determining a transition point between one of charging and discharging and the second threshold value determining a transition point between the other of charging and discharging.

8. The oscillator circuit according to claim 7, further comprising a comparator in the threshold circuit having an input coupled to the capacitor and another input selectively coupled to at least one of the first and second threshold.

9. The oscillator circuit according to claim 8, further comprising a switch having an output coupled to the comparator and an input coupled to at least one of the first and second threshold, whereby the first and second threshold are selectively applied to the input of the comparator.

10. An electronic ballast control comprising the oscillator circuit according to claim 7.

11. A method for providing a variable frequency signal, comprising:  
charging or discharging a capacitor at a selected rate to obtain a variable capacitor charge value;

determining when the capacitor charge value reaches a predefined value;

- 5            changing the charging or discharging state of the capacitor; and  
             controlling the selected rate with a digital value.